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ABORTION—ITS ENTAILMENTS.

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The illimitable reproductive resources of nature, and the prodigal fecundity of her species throughout the animal and vegetable kingdoms, impress both the casual observer and the scientist alike with admiration and astonishment. Malthus, in enunciating his doctrine, that human population, when unchecked, increased more rapidly than the means of subsistence could be made to increase, must have overlooked the reciprocity and universality of creation's prolific principles. Instead of venturing to regulate natural processes, and the destiny of eternal laws; Malthusians would profit by studying, and trying to correct the motor incentives of "man's" inhumanity to man, that makes countless millions mourn. When indiscreet customs and dire practices invest and weaken the citadel of developmental germ-life; when withering violence indiscriminately treads the tender blade, or blasts the defenceless life principle, "the survival of the fittest" becomes a hypothesis no longer tenable. Fœtal fitness is of no consideration in uterine physical incapacity, nor is it of any consequence in modifying the effects of destructive agents. The irresistible tornado prostrates alike the strong oak and the slender vine. Who is not familiarly impressed with the observation of these facts presented constantly in the physical world? The rate of infant mortality, so unmistakably shown by statistics, is astounding. The medical student and observing practitioner have great reason to believe there is in the unwritten history of intra-uterine revelation a fœtal death-rate ten times more appalling.

Physiological scrutiny has greatly enlarged our knowledge of the processes of ovulation and fœtation, thus narrowing the field of superstition and speculation, and widening that of pathological research. Pathology detects abnormal conditions which are incompatible with healthly fecundation and successful gestation, thus contributing to the glorious conquests of gynecological medicine. Gynecologists, studying the innumerable causes and terrible sequences of uterine affections, venture to remedy individual cases, but despair of removing the hydra-headed evil politic, for it incubates in the wierd conformations of society, is nestled in the meshy caprices of fashion, is veneered with the gauze of a philanthropy, and it dares to dally with the juridical ermine, without material interference.

However cognizable may be these deductions and conditions, in the absence of statistical tables (which never have been, and never will be, written) showing the extent and the injurious results of abortion, we are compelled to study the subject more in detail. For opinion and experience we cannot do better than quote our authorities, whose evidence, though not statistical, would be legally accepted as conclusive, and will be medical orthodoxy until some time in the dim future, when negatives and affirmatives become synonymous terms. "Abortion, even under vigorous treatment, at a very early period of gestation, does sometimes prove fatal very speedily. I know of one instance,

and have heard of more, which proved fatal so early as the end of the second month. If frequently repeated, abortions are apt to injure the health and break up the constitution."—John Burns, M.D., F.R.S., work on midwifery. "Abortion is one of the most prolific causes of uterine disease in after life. The number of fœtal lives lost by abortion is enormous."—Playfair. Dr. White, President of the Academy of Medicine, Cincinnati, Ohio, mentions among the terrors of abortion, that "in the mother there may be laid the foundation of life-long disease, and in many instances her own life has been sacrificed." "The immense number of instances wherein pregnancy terminates prematurely, attended often with disastrous consequences to the mother, invests the subject of abortion with an importance which few others possess, rendering its causes and phenomena deserving the strictest investigation."—Jas. Whitehead, F.R.C.S., work on Abortion and Sterility, page 10. One of our best writers on midwifery, Meigs, but repeats that which is universally taught by obstetrical teachers, and is most familiarly understood and reiterated by medical students and practitioners, when he affirms that "a woman who has suffered one abortion is more liable to a similar accident in subsequent pregnancies than she who has not suffered in this way." T. G. Thomas, M.D., charges induced abortion as "a great cause of uterine disease."

"If we trace with care the history of a large percentage of the pauper female patients in the hospitals, work-houses and county institutions, we will be astounded at the numbers whose health was first broken by abortion. In my own practice I have been enabled to directly trace a large per cent. of uterine troubles to abortion. In private life, both in the married and the unmarried, do we, when the truth is discernible, discover abortion as a proximate or remote cause engendering their present conditions of disease and incapacity."—(Montrose Pallen, Professor of Gynecology in the University of the City of New York, in his prize essay entitled, "Why Not?" awarded by the American Medical Association.) Storer, in speaking of the inherent dangers of abortion to a woman's life and health, declares that "a larger proportion of women die during or in consequence of abortion, than during or in consequence of childbed at full term of pregnancy;" and that "a very much larger proportion of women become confirmed invalids, perhaps, for life." Other high testimony might be introduced almost ad infinitum, but this should be amply sufficient.

No one ever questions the ominous character of irregularities and arrestations of natural ovulation. Then it is unreasonable to suppose that disappointment in nature's advanced efforts at fecundation and gestation can possibly presage less evil. Indeed, the careful observer must notice that both the specific causes and the specific effects of the latter are greatly multiplied over those of the former. In specific causes I include with the affections potentially known to directly vitiate the gestative act (such as venereal or other local and constitutional diseases) all violent means, whether accidental or willful, which may produce artificial or forced abortion. The idea does not, to me, seem reasonable, that induced abortion would be less dangerous, and attended with fewer subsequent evils than natural abortion, notwithstanding the wild assertions of some, of the perfect safety and harmlessness of the former when conducted according to medical art! Thus the entailed physical evils of abortion impress us as being of such importance as to demand serious consideration, and we venture to briefly mention, generically, some of them, *ad inquirendum.*

The relation of cause and effect existing between abortion and uterine affections, inflammation, displacement, etc., also constitutional debility and nervous diseases, is well known and understood. If local or constitutional infirmities contribute to the process of fœtal destruction and abortion, so do abortion effects increase existing troubles, and engender new ones.

With this notice, en passant, of the natural and artificial modes, as alike forerunners of evils which are pronounced in the same category of diseased action, the following will serve the better to indicate more specifically the character of post-abortion ailments.

Of 1600 patients (dispensary) treated by F. A. Ashford, M. D., Columbia Hospital, (Report, 1873, page 253) "but two cases of acute metritis have been treated, . . . and both were the results of attempts to produce abortion by the use of instruments;" and "a uterus," says the author, "which has been the seat of any inflammatory action is exceedingly susceptible to a recurrence . . . upon the slightest provocation." In summing up the etiology, the surgeon-in-chief of Columbia Hospital mentions abortion

as a principal cause of metritis and endo-metritis; and Dr. E. Nœggareth, in a paper published in the *American Journal of Obstetrics* (Vol II, page 505), relates a number of cases where he had amputated the cervix uteri for cancerous diseases supervening upon chronic metritis.

Paul, of Ægina, asserts that the uterus becomes scirrhous most frequently following inflammations. In speaking of carcinoma, J. H. Thompson believes abortion, when often repeated, to be one of the principal causes. "Astrin claims that a large majority of cases of carcinoma-uteri are the results of abortion." Récamiér, Lisfranc, Ashwell, Montgomery and others add their testimony to the same belief.

Horatio Robinson Storer, now of Newport, R. I., in his prize essay, declares that "the tendency to serious and fatal organic diseases arising from abortion, as cancer, is rendered much greater at the so-called turn-of-life," and also, that cases of insanity resulting from abortion "are not uncommon." These are strong and conclusive evidences of the widespread prevalence of pre-natal destruction, of the immediate serious and fatal consequences attending abortion, and of the long catalogue of physical ailments acquired therefrom, making countless numbers of women miserable and helpless.

But what of the inherited injuries inflicted upon and transmitted to the unborn babes and future generations, expressed in nosological terms, feeble, lame, distorted, maimed, blind, deaf and dumb, idiotic, and so on to the end of medical classification? Do not thousands of these fearful witnesses of man's strife with his Maker appear upon life's pathway, perchance clothed in silk and fine raiment, but generally clad in rags, on the highway, or mobilized into the prisons, hospitals and workhouses, burdening with taxes the people of every nation? Upon this subject we cannot do better than quote Storer in extenso. In speaking of unsuccessful criminal efforts to dislodge the fœtus, he says, "Fractures of the fœtal limbs prior to birth are often reported, unattributable in any way to the funis (cord), which may amputate, indeed, but seldom break a limb. A fall or a blow is recollected; perhaps it was accidental, perhaps not, for resort to these for criminal purposes is very common. In precisely the same manner may injury be occasioned to the nervous system of the fœtus, as in a hydrocephalic case long under the writer's own observation, where the cause and effect were plainly evident. Intra-uterine convulsions have been reported as induced by external violence; they are probably not uncommon, and the diseases thus begun may eventuate in epilepsy, paralysis, or idiocy. Not only is the fœtus endangered by the attempt at abortion, and the mother's health, but the stamp of disease thus impressed is very apt to be perceived upon any children she may subsequently bear." In another place he says, "Not only do women become sterile in consequence of a miscarriage, and then, longing for offspring, find themselves permanently incapacitated for conception, but, in other cases, impregnation, or rather the attachment of the ovum to the uterus being but imperfectly effected, or the mother's system being so insidiously undermined, the children that are subsequently brought forth are unhealthy, deformed or diseased. The matter of conception and gestation after a miscarriage has of late been made a subject of special study, and there is little doubt that from this, as the primal origin, arises much of the nervous, mental and organic derangements and deficiency that, occurring in children, cuts short or embitters their lives." If such be the physical entailments of abortion, what must be the consequent mental woes and social bereavements. Let the victims, in their contemplations of self-guilt, in their reflections upon the wickedness and culpability of some parents, stricken with disappointment and sorrow, let these speak the answer, for the land is full of them, and grief, unheeded, sheds her tears over new-made graves, while the swelling tide ever increases in force and velocity.

What of the involvement of moral principles? To physiological ignorance belongs a great part of the spiritual blindness that contributes to the existence and perpetuity of these social and criminal evils. Habits and fashion, as well as exposure and dissipation, with wrong views of the life principle and its origin, are alike predisposing causes which lead to the same end, fœtal destruction.

Rev. Joseph Cook, after defining life to be the "coördinating power behind the movements of germinal matter," says "Life begins the very moment anything is structured; you crush a germinant acorn, you kill an oak;" and craves audience to the doctrines of the Romish confessional, rather than to the support "of

fashionable murder in some fashionable circles of society."

What of national integrity? Historians attribute the downfall of nations to vice, licentiousness and crime, and statisticians and medical writers point to the evils of which we have spoken as primary agents in the general ruin. Individual quality more than political numbers makes a nation strong, and no government can afford to lose interest in the nature and source of her supplies, or encourage or permit poisonous elements in its moral and political police. In the foregoing is written much of the story of the disappearing of the North American Indian; and now, from the same cause, is plainly visible the rapid decay of the colored race of the South.

Why this depravity? this bereavement? this waste of life? Sanitarians in vain point to the insidious effects of fashion in dress, and in customs, to obscene literature, and to dangerous and deceptive teachings and advertisements of charlatans; to sedentary habits and vicious living.

The song of the philanthropist is burdened with pity for poverty, and with holy lamentations over human depravity. In the midst of all, heedless of facts, and blind to our own turpitude, moralists too often, with uplifted hands and voices, sacrilegiously exclaim, "Thy will be done!" The jurist, ofttimes forgetting that society and government are, to a great extent, responsible for the conditions and influences that shape individual character, only discerns *crime*, and for its remedy, hurls anathemas and dire punishment upon unfortunate malefactors.

Nor are medical men ignorant of the magnitude of criminal practices. Dr. White says, "The murder of unborn infants is the great crime of this age. Physicians stand aghast at the knowledge of its extent, and deplore their want of power to arrest it." Professor Thomas, in his work on "Diseases of Women," after characterizing induced abortion as a national crime, declares that this crime is so frequent as to constitute, in all classes of society, for it is limited to no one, a great cause for uterine disease. Professor Montrose Pallen stigmatizes the United States as "bearing off the disgraceful prize of having a national crime of abortion."

Against the crime of fœticide, the American Medical Association, composed of the highest medical representatives of the profession, has emphatically pronounced, and in the name of Storer, the prize essayist, has offered to the public and the profession her pronunciamento. This should be read by all practitioners, and the subject held up constantly before us, lest our sympathies with friends or the unfortunate might lead some into unprofessional errors before they had considered the question properly. Much, too, is and should be expected of the seniors in the profession, in advice, counsel, and example worthy the emulation of their juniors, and in personal influence to preserve the art from the least soil of prostitution.

Professionally we have nothing to do with Malthusianism, and practically we are all enemies of the human race, measured by the Darwinian standard, for we are to administer to, and labor mostly for, those who are weak, and so, in his theory, unworthy to exist. Nevertheless, this is our proudest prerogative.

THE NATURE, ORIGIN AND PROGRESS OF DISEASE IN THE HUMAN BODY.

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The manner in which we propose to investigate this subject will make it necessary for us to consider the composition of the body itself. The body is composed of atoms, and these atoms are arranged according to fixed and established laws, laws that cannot be changed. They can no more be changed than the Almighty who established them can change. These laws are: First, the law of origin. Second, the law of growth or development. Third, the law of waste and repair.

The different parts of the human body are formed by some combination of atoms. The manner in which these atoms are combined determines the nature of the formation. The combination of atoms forms molecules, and molecules combined, form cells; the cells thus formed are proliferated into tissue. A certain arrangement of these tissues forms an organ, and a certain arrangement of these organs thus formed constitute the human body.

There are three different states of matter known to us, namely, solid, fluid, and gaseous. We find matter in these different states in the human body. This may be called the molecular condition of the body. Before proceeding with our inquiry, we must understand what is

meant by atom, molecule, and cell. We do not use the terms atom and molecule as synonyms in this discussion. An atom is a unit. It is indivisible matter, whether solid, fluid or gaseous. By molecule we mean some combination of atoms. To illustrate our position we will take alcohol. Alcohol is a compound made up of atoms of carbon, hydrogen and oxygen, in certain proportions. Twenty-four atoms of carbon, six of hydrogen, and sixteen of oxygen. When thus united they make alcohol. No other combination of these atoms will produce alcohol.

Another illustration. Water is a compound substance, made up of hydrogen and oxygen in certain proportions. Two of hydrogen, and sixteen of oxygen. The magnitude which we call a molecule of water consists of two magnitudes, which we call atoms of hydrogen and oxygen. The relations in which atoms stand to each other are far reaching and intricate, and cannot be accidental.

The elementary atoms of which the body is composed have a certain number of bonds by which they are united. And by these alone can they be united, for a specific purpose. The manner in which the atoms are grouped together in the molecule is important for us to understand in the prosecution of our inquiries on the subject. Every molecule is a unit in which all the atoms are joined together by their several bonds; and it becomes an object of great interest to investigate and determine the exact manner in which the molecular structure is built up. To understand the diseases of the body we must study the structure; and in order to study its structure, we must understand the structure of its molecules, as well as the atoms of which the molecule is composed. Certain atoms are united according to fixed and established laws, and when thus united, they make a molecule, as in the formation of alcohol or water. Molecules thus formed, when combined in a certain manner, according to these laws, form what is called a cell. We are now speaking of normal action. The nature of the cell is determined by its composition. The cell thus formed is proliferated into tissue, and it is by this process that the different organs of the body are built up.

Now, when we come to consider what constitutes disease of the body thus formed, we are led at once to the conclusion that there must be some disturbing force, that has changed the operation of these laws. This, then, brings us to the definition of disease, and we shall not define by enumerating symptoms. But we will define disease of the human body, at all times and under all circumstances, to consist in atoms out of place.

The atoms of which the body is composed cannot be changed in their nature. They are the same in substance and in nature at all times and under all circumstances. Yet an atom out of place must break down and destroy the molecule. Take a molecule of alcohol and abstract an atom of oxygen therefrom, and you will no longer have alcohol. An atom is out of place, and that destroys the molecule. The change of a molecule of a cell must result in a change of the nature of the cell, and the cell thus changed cannot be proliferated into normal tissue. Its very nature is changed; yet the laws by which it was formed are not changed. The atom is the same, and the laws that govern atoms are the same.

There is another law that steps in here and controls. It is the law of waste, or, perhaps, of decadence, I should say. The moment a molecule is changed it produces a change in the cell of which it is a part, and that cell may form degenerated tissue, a cancer, if you please. must continue to degenerate until it is resolved into its original atoms; and they are indivisible and indestructible. The atoms of which the molecule is composed, and the molecules of which the cell is composed, are not thrown together promiscuously, but are united by certain bonds, and the microscope reveals the fact that the atoms of which the molecule is composed are continually in motion, in every conceivable direction and manner. Now, there is some force that operates to produce this motion or action. The life of the molecule must be determined by the motion of the atoms of which it is composed. The life of the cell must be determined by the character of the molecules of which it is composed. A change of an atom must change the character of the molecule, and a change of a molecule must change the character of the cell; and when the cell is changed thus, you have an abnormal state or condition of the part, and that is what constitutes disease of the organism. This must in all cases, at first, be local. It must commence in the molecule. Some disturbing force changes the atom of the molecule. Or, some disturbing force disturbs the molecule of

which the cell is composed, and it cannot now be proliferated into normal tissue. The changes that are produced in the system are isomeric. These changes do not produce germs. There is such a thing as a diseased germ. The change of a single atom of a germ would produce a diseased germ; but that diseased germ could not produce a normal germ or tissue. A kernel of rye is a germ, and when it is placed in a proper position, and surrounded by proper influences, will reproduce itself. Yet an isomeric change will make it produce ergot, and the ergot will not reproduce itself, nor will it produce the rye. It is an entirely different substance from the original from which it sprang.

Let me illustrate this subject by a reference to the cow pox and small-pox. These diseases change the system, so that the virus of small-pox will produce no effect upon the organism. The change is isomeric. There is no change of the atoms of the molecule. There is no change of the molecule of the cell. The body grows and changes as before. The offspring of parents who have been vaccinated, or who have had the small-pox, are not protected thereby from small-pox. They must be vaccinated to be protected. The peculiar state of the organism produced by the cow-pox, or by small-pox, is not transmissible to posterity.

The germ that produces the new being does not partake of the change that has been produced in the organism of the parents by either of the above named diseases. And let me ask here, how is it possible that any disease can be transmitted by natural generation? The laws by which the body is built up are hid from our vision. Certain things with regard to them we can understand: the formation of cells and the proliferation of cells into tissue; also the perversion of a cell by a disturbing force, so that it shall form an abnormal tissue. These facts lead us, in our inquiries, at once to consider the constitution of matter. Here we find a principle of energy and motion. We also find a differentiation and harmony. "This principle, whatever it may be, is called spirit. Spirit, then, is not substance, but it is the law of substance; it is not force, but it is the revealer of force; it is not life, but it makes life exist; it is not thought, but it is the consciousness of thought" (Maudsley. Virchow). Carpenter says "Spirit is the sole and single source of power." Spirit, then, is not a property of matter, but matter is a property of spirit. The materialists stop short at atoms, and localize those properties for which atoms supply no cause.

The source of differentiation, harmony and force, cannot be in energy itself. It must be in a principle apart from that energy. In our investigation of the origin of disease in the human body, we must keep in view the above principles. There have been volumes written to prove that certain diseases are transmitted by parents to their posterity. This doctrine we do not believe. It has never been established by proof, and if our views are correct it never will be established. Let us consider the ovum for a few moments, with the above principles before us. The ovum is a cell of peculiar construction, in accordance with fixed and established laws of the human organism. This cell is composed of molecules, and these molecules are composed of atoms. In this cell there is harmony, motion and differentiation. The action that is here set up, if undisturbed, will develop the new being. A disturbing force prevents the development of the new being, and would prevent the formation of the nucleus of the new organism. The law of reproduction and of decadence cannot act in harmony with the same atom. All the atoms of the ovum are necessary to the development of the nucleus and the new being. A mixture of normal and abnormal molecules cannot form a normal cell. The ovum commences by the union of two or more atoms. This union is according to established laws. The atoms are indivisible and indestructible. This union makes a molecule, and the union of molecules makes the cell. Now, take twenty-four atoms of carbon, and six of hydrogen, and fifteen of oxygen, and one of nitrogen, and unite them, and you will not have alcohol. The nitrogen is a disturbing force, and will prevent the formation of alcohol. So the virus of small-pox or syphilis, or of any contagious disease, must be something, it must be more than an atom. It must be some union of two or more atoms of different substances. However it is constructed, it is, in its nature, a disturbing force, and must prevent the union and action of molecules in the formation of the ovum. After the nucleus is formed, and the new organism is developed so as to receive pabulum from without, a disturbing force may be introduced, and a certain portion or part of the new organism may be destroyed or changed.

Disease may thus be set up and run rampant, riot and feed upon the new formation, until it finally destroys it. There are now a multitude of cells to destroy; at the commencement there was but a single cell. Strictly speaking, then, there is no such thing as functional disease. All disease must begin by some atomic change. Functional derangement is only a symptom of disease. The changes that produce what we call disease are isomeric. 1. According to the views presented in this paper, the popular doctrine of germinal origin of disease is not well founded. 2. All diseases of the human body are organic. 3. Disease is not, and cannot be, propagated by natural generation. There is, unquestionably, a peculiarity of organism transmitted from parent to child, that predisposes to certain diseases. This is very different from propagating disease itself. 4. Much of the present manner of administering to remove disease is worse than doing nothing.

Hospital Reports.

JEFFERSON MEDICAL COLLEGE HOSPITAL, MARCH, 1878.

CLINIC OF DR. LAURENCE TURNBULL.

REPORTED BY CHAS. H. WEIKEL, M. D.

Congenital and Acquired Defects of the External Ear.

Gentlemen: I have the pleasure of bringing before you some interesting and instructive cases of congenital and acquired defects of the human ear, a knowledge of which may be useful when you enter into active practice.

The first case is one in which there is not an entire absence of the auricle or external ear, but it is a rudimentary state. The little patient is only nineteen months old; otherwise a fine, large child of this age; general health good. The child was born of healthy parents, in Allegheny city, Pa.; the presumed cause given was that the mother, during her pregnancy, was frightened by a dog. I will pass around a photograph, so that each member of the class can examine it. It will be noticed that there are but three rudimentary portions of the auricle, the two upper being projections of cartilage and the lower one having a curved appearance. There is no lobule, and in the space where the concha and meatus are usually found is a plane surface covered with skin, the auditory canal being wanting. In the picture there seems to be a depression in the locality where the meatus should be; this is the cicatrix after an attempt to open the tube; a circular piece was cut out, but the space was persistently filled up. The tragus is entirely wanting, therefore there was no guide to the operation, although the physician, a very intelligent one, who sent the case, thought he could feel the cartilage which formed it, but I was not able to do so. On testing the child's hearing for that (the right) ear, it was noticed that when the watch, a very loud ticker, was placed near to but not touching the ear, his eye brightened and he looked as if he heard; the same result was noticed with the tuning fork, even when the face was turned from it.

When you examine little children for hearing, before they are able to talk, you can never arrive at a positive conclusion in regard to it; you will have to rest satisfied with an approximation; and this was all I could do in this case. It is sometimes one of the most painful duties which the physician has to perform, to decide and state the fact that a child is absolutely deaf; the parents and friends of such children often deceive themselves with the idea that the child hears, when loud noises of various kinds are noticed by the child, which is usually the result of simple concussion and vibration of the air or floor. When testing such cases the eyes of the child on which the experiment is made should be turned from the cause of such noises. To be absolutely sure, it is well to test the hearing in the dark, but by no means allow the child to see the watch, tuning fork, etc.

The prognosis in this case was, therefore, very guarded, the only favorable feature being the hearing on the right side, when the opposite ear was carefully closed.

Prof. Wm. H. Pancoast was invited to examine the case with me, and his opinion was, as there was no risk of an operation, and a prospect of benefit, that we would be justified in a second operation, especially as the parents of the child were very desirous that an attempt should be made. The mode of operation first decided upon was cutting on a line with what would have been the depressed or wanting tragus, but the second incision was on a line forming the inner border of the antitragus, cutting one-third of an inch in depth, as far as what is known as the cartilaginous portion of the auditory canal, and allowing for the skin and tissue which covered it.

June 2d. Dr. Allis administered the anæsthetic (ether), and three minutes elapsed before the little patient was fully under its influence. Drs. Young and Darlington, with the father of the child, were present as spectators. After the removal of a curve-shaped piece of skin, connective tissue, etc., the probe was introduced and sunk into a depression of half an inch, but no cartilage or bony meatus was found; this opening was then filled with patent lint saturated with carbolized olive oil, and every means taken, for thirteen days, to keep the parts open.

June 15th. The parts being healed and filled up, the little patient was again placed under the influence of the anæsthetic, the parts freely opened, and, at the suggestion of Dr.

Allis, a wooden plug was made to fit the opening. A letter was then directed to the physician who sent the child, to try to keep the parts open. This was conscientiously performed, but, with all his care, the parts filled up, leaving but a depressed cicatrix.

Now, what is to be learned from the history and the operations in this case? First, it is proved that there was no cartilaginous portion beneath the skin forming the auditory canal, and that in such cases, where there is an entire obliteration of the meatus externus, there has been found, by careful dissection, an absence of that portion of the temporal bone which forms the tympanic ring and the lower side of the bony canal of the meatus, and the extension backward of the articular and true glenoid portion of the temporal bone is twice its natural breadth.

The next case I show you is not so striking a departure from the normal form, but is a cutaneous closure of the external meatus, and with such there is sometimes a contraction of the osseous walls, which may be relieved by opening the canal with the knife, and subsequent dilatation by oiled lint, compressed sponge, or bougies of laminaria; in this way we have restored the hearing of more than one patient. The parts, however, are so apt to contract that it may be, and sometimes is, necessary to fill up the auditory canal with a gold or nickel-plated funnel-shaped tube until the parts heal. On examining the left ear, in this case, we find that where the auditory canal should be, the place is covered by a smooth skin; every other part of the ear, although smaller, is almost perfect, and her hearing is almost the same (good) in both ears. Her mother states that the cause of the deformity was owing to a child having slept with her, and having placed its foot on her (the mother's) ear, she was suddenly aroused from her sleep by the strange feeling, and supposed it to be a rat.

Another class of cases is where there is narrowing or closure of the external auditory meatus, either congenital or acquired, by tying cap-strings or ribbons behind the ears. A case of this kind, which I now bring before you, is an old Irish lady, where there is nothing but a slit, caused by the constant pressure of cap-strings passed behind her ears and tightly tied under her chin, a form of contraction of the cartilaginous meatus where all the secretions are retained, and produce deafness and chronic eczema of the meatus, with an accumulation of cerumen, epithelium, etc. This class of cases requires repeated and careful syringing, to keep the ear clean, thorough drying of the parts, and sometimes a quill or metallic tube, to keep the walls of the meatus from collapsing.

We have still another variety, in which the canal becomes more or less obstructed by exostoses or bony growths, and this, from retained secretion or by pressure, causes deafness and serious trouble also. These growths are sometimes removed by means of a perforator or hand-drill; the continuous galvanic current has also been applied after the removal of any skin covering them; two or three needles may be used, and perhaps passed into the bony mass, after first drilling with a hand-drill. The application of the current may be made under the influence of ether, to be repeated from three to five minutes, for a succession of days, until the bone is separated. Stöhrer's battery is usually employed, the number of cups brought into the circuit being from ten to thirty. It usually requires two weeks of treatment. Where there is simply uniform closure of the bony meatus, without distinct rounded masses, or osteophytes, it has recently been suggested, and in one case employed with success, to remove them by means of the dentist's drill. A very beautiful instrument of this kind has been devised and employed by my friend, Professor Garretson, of this city, and figured in a recent number of the *Medical Times*. Care, prudence, and cautious haste, however, are important in employing such violent measures for the relief of these congenital and acquired closures, as inflammation is almost sure to follow, and in one case such a result was induced, and with it facial paralysis of that side.

There are two diseases in which contraction of the cartilaginous and osseous meatus occurs: the first is during and after chronic otorrhœa; the second disease in which it occurs, although more rarely, is non-suppurative inflammation of the middle ear, and is in both cases the result of inflammatory action accompanied by hypertrophic formations of tissue, or bone, or both, and occurs as well throughout the whole petrous portion of the temporal bone. This form of closure is termed hyperostosis. Aldinger narrates (*Archiv für Ohrenheilkunde*, vol. xi., No. 2, 1877) a case of exostoses in both meatus, cause not known, except from tympanic inflammation. Gout and syphilis are considered by most authors to be the causes of these exostoses. I have reported cases in my "Manual of Diseases of the Ear," where, in one, there were three enlargements of the bone projecting into and almost completely closing the meatus, which was improved by treatment with the solid nitrate of silver, etc. Another case was operated upon by narrow chisels applied directly to the base of the exostosis, with previous incision of the skin, and it required strong blows with a wooden hammer to remove them. The case did well after the acute inflammation had subsided and the granulations had been reduced. The patient was left with a good sized meatus, and fair hearing, after protracted local treatment.

Two other forms of ear disease I now show you, one of which is termed desquamative inflammation of the auditory canal, and the other impacted cerumen.

Now and then you will notice that in certain cases you may acquire, quite suddenly, a reputation for relieving deafness, by simply syringing the ear and removing a mass of impacted cerumen. This form of deafness results from an accumulation of cerumen, the cause of which

comes from the habit of passing the end of a towel, brush, or "aurilave" into the external auditory canal in washing the ear, and so gradually pressing the cerumen into a compact mass, which fills up the canal. The canal may be full in its upper part and the patient able to hear well, but suddenly there comes a very hot day and sweat runs into the meatus, or the patient takes a hot or a sea bath, or somehow water gains an entrance alongside of and soaks the mass, and gradually or suddenly the cerumen swells and falls into and presses upon the membrana tympani. This pressure on the membrane, besides causing deafness, extends through the ossicles to the stapes and oval window, and causes tinnitus and buzzing noises, pain, giddiness, confusion of ideas, with a feeling of weight and pressure in the labyrinth from the endolymph being compressed, and its reacting upon the auditory nerve. If this pressure is relieved by removing the mass by syringing or by other means, as if by magic, relief is afforded, and the patient is full of gratitude; and if this mass has not remained long enough to produce a permanent change, as in chronic cases, the membrane assumes its natural curvature, no longer remaining depressed, and the ear regains its healthy condition. If this should happen in more than one case in succession, the medical man is of the opinion that all cases of deafness are to be relieved in a similar manner, and both he and his patient are convinced that he has acquired the secret of curing a most troublesome malady, the patient often acts as a disciple of the doctor, and will go about informing every deaf person he meets of the wonderful success of his physician; and then there comes another class of cases, which is termed chronic. These cases may have visited every aural surgeon for relief, or perhaps the patient comes for the first time; the physician examines his new case and finds what looks very much like the old trouble; he goes to work and carefully removes what seems to him a mass of cerumen, but after numerous syringings he no longer removes a plug of dark brown cerumen, but only a mass of large flakes of what the older writers called epidermis, and what is now known to be more properly epithelium. This epithelium or pavement-like covering of the skin of the ear, in most healthy individuals, is removed by a natural process, just as it passes off from the skin of the rest of the body when friction is employed, and can be seen, as when in the sunlight we rub the surface of the skin, and these flakes float in the air. If, however, moisture from any source finds its way into the ear, they no longer pass out, but become massed together with particles of cerumen, and even form tumors (cholesteatomata) which may perforate the membrana tympani, as in one of the cases I am about to show you.

Colonel O., aged 50; general health good; most of his family have suffered from gout. His ears have been giving him some uneasiness, and he is troubled with deafness; once in a few months there would form and escape a complete globe-like cast of the auditory canal, now and then tinged brown with cerumen, or red with blood. While the mass was becoming loose he suffered from distressing noises and pain, but after its removal by syringing, and the subsequent use of astringent and alterant washes, he would be free for several months. His hearing is more or less impaired. This is an example of the ordinary mild form of this disease.

Case 2.—Thomas M., aged 32, by occupation a collector, resides in Philadelphia; both father and mother are living and not deaf; their general health is good. The patient suffers from deafness and distress in both ears; the disease commenced first in the left ear, and subsequently attacked the right, and this has caused him to apply, for fear of losing the hearing in that ear. He knows of no cause, except that he has been told he was scrofulous, or that he is frequently exposed to the weather by reason of his out-door occupation. He has at times intense itching in the external auditory canal, with a constant humming noise and throbbing, with pain, and a confused feeling in the head, and now and then a chill following these irritable attacks; occasionally there is a small amount of discharge. He has had no treatment. The disease has been of three years' duration in the left ear and some six months in the right. There is more or less seborrhœa of the scalp, with slight eczema of the eyebrows and skin. On inspecting the auditory canals they were found to be filled with a dirty-white and brownish mass of scales of epithelium, etc., a portion of which was removed with the curette and forceps, which, on microscopic examination, was found to consist of scales of epidermis, cerumen and cholesterine crystals. There is also a peculiar fetid odor noticeable about the left ear. His hearing in the right ear was seven feet, with a watch heard at twenty-five feet, or about one-third the normal distance, while in the left ear the hearing was reduced to twenty inches. When the material was removed by careful syringing, after having previously softened the mass with a solution of bicarbonate of soda, glycerine and warm water, there was found an irritable red meatus, and in the left ear the same, with a perforation of the membrana tympani, surrounded by granulations springing from the walls of the canal and passing into the middle ear. This is to be treated by careful syringing and the use of astringent and stimulating washes and a mild ointment to protect the skin of the meatus from the irritation of both moist and dried discharge.

NEW YORK WOMAN'S HOSPITAL.

SERVICE OF DR. T. ADDIS EMMET, APRIL 2D, 1878.

Congenital Absence of Vagina—Operation.

Dr. Emmet presented a married lady, aged twenty, upon whom he had operated three weeks previously. The history of the case was as follows:—The patient presented evidence of

being in ordinary health, but on examining her, although the vulva was found to be normal, there was no vagina. When the finger was carried into the rectum, a small body could be discovered, anteriorly, and about five inches from the anus. No ovaries could be made out. The patient was then anæsthetized, and an incision made midway between the anus and urethra. The vesico-rectal septum was quite thin, and much care was requisite in avoiding the rectum on the one hand, and the bladder on the other. As the separation of the tissues was carried on, the only guides were the finger in the rectum, and the sound in the bladder. The artificial vagina was extended up for five inches, but no sign of uterus could be made out, nor, indeed, could the body be discovered which formerly was recognized by the rectal examination. After the operation, a glass plug was inserted in the opening, and retained in position by an appropriate bandage. This plug was of the ordinary variety, resembling a very large test tube, with a depression to accommodate the urethra. The plug measured five inches in length by two in diameter. Since the operation, the case has progressed satisfactorily. The plug had not been removed, and, on looking into it, cicatrization was found to have extended down for a couple of inches. Suppuration was noticed over an area of an inch. Dr. Emmet said that he regretted that he had not performed the operation under the antiseptic spray, as there then would have been a possibility of no suppuration. He said, in looking over the literature of the subject, that Fletcher, in England, over forty years ago, had recorded a case, in which he had formed a vagina. The method practiced was to make an external incision, and then, by means of a mallet, drive a bougie between the rectum and the vagina; this operation extended over a period of eight days, and resulted successfully. In the case recorded, coition had taken place previous to the operation, by means of the urethra. Neither the husband nor wife were aware of the proper condition of affairs before the examination. Dr. Emmet had seen similar cases. There was no incontinence, for the reason that the tissues of the urethra and neck of the bladder folded together, and prevented the escape of fluid. Subsequently, Amussat described an operation for forming a vagina. It consisted in making a small, deep incision, and then introducing a sponge tent, a succession of incisions, with sponge tents; resulted in a vagina.

Dr. Emmet had found that after the vagina had been formed, frequently the uterus, which previously could not be made out, developed, and menstruation took place. When menstruation did take place, contraction of the vagina ceased.

In cases of atresia of the vagina with imprisoned menstrual blood, it was important to make a free opening and then thoroughly wash out the uterus with hot water. The former method of practice was to make a small opening. The precaution defeated its purpose, because septicæmia, which was thought to be guarded against, resulted, and the only common sense procedure was to remove the cause of the septicæmia.

Epithelioma of Cervix. Removal by Galvano-Cautery and by Excision.

Two interesting cases were shown, in which a different method of treatment was pursued. The first case was an epithelioma, which extended up and invaded the cavity of the uterus. The galvano-cautery was used, but did not prove satisfactory, for the reason that the battery was not sufficient to furnish a current powerful enough to keep the platinum wire hot.

The second case was one in which the epithelioma involved the cervix, but did not extend to the body of the uterus.

Dr. Emmet said that in cases where the epithelioma involved only the cervix, he was in the habit of performing the operation of Dr. Marion Sims. The advantages were that the disease did not so readily return; and moreover, there was no ulcerated surface left exposed.

The woman was placed in the ordinary semi-prone position, and Sims' speculum introduced. A large mass, closely resembling an inverted uterus or polypus, was found to depend from the anterior and posterior lips of the cervix. This was cut away with the scissors till the healthy uterine tissue was reached. The vagina was then slid over the cut surface of the cervix, and secured in position by wire sutures. The operation closely resembled an ordinary circular amputation. When the vagina was secured in position, the canal of the cervix was not closed. After the operation was finished, the parts had the appearance of an amputated cervix in which the cut surfaces were brought together.

Medical Societies.

PHILADELPHIA COUNTY MEDICAL SOCIETY.

Tracheotomy in Croup.

At a conversational meeting held at the Hall of the College of Physicians, Dr. John H. Packard made some remarks on Tracheotomy in Croup, which excited some discussion.

Dr. Thos. M. Drysdale remarked that the thanks of the Society were due to Dr. Packard for his able and interesting paper, and for bringing up such an important topic for discussion. The subject had been before us several times during the winter, and the operation had been highly praised, not only for the relief it afforded the sufferers, but that in many cases it snatched them from certain death by suffocation. He thought that one point had been overlooked, *the condition of the patient at the time of the operation*, or at least, this had not been dwelt upon sufficiently to give us an idea of the extreme agony and imminent risk to life of these patients before the operation is thought of by the physician or submitted to by the parents.

He regretted that he could not bring before the Society the little patients, now living, upon whom he had operated; but as this was impossible, he asked permission to read short notes of cases in which the operation had been performed. He selected nine of these, each of which was apparently beyond the reach of medicine, and of these desperate cases he had been able to save three of the nine.

Case 1.—Nov. 22d, 1856, Dr. A. McWhinney called on him to operate on a child, three years of age, who had been laboring under membranous croup for five days, and was "dying from asphyxia." He found the child with a feeble, irregular pulse, gasping for breath; surface damp and cool; face a bluish-white color; dark circles around the eyes; lips livid. The child was so exhausted that, had it not been for the urgent solicitation of the physician and father, he would have declined operating. An unfavorable prognosis was given, and the operation proceeded with, but the greatest care was necessary in order to avoid cutting the veins, which were so congested as to completely cover the trachea; yet the utmost precaution could not prevent him wounding two veins, which bled profusely and impeded progress until they were ligated. The trachea was finally reached and the tube introduced, when a plug of false membrane and mucus was forced into the canula. This was at once removed, but the child, after making faint efforts at inspiration, expired, apparently from exhaustion. Artificial respiration was used, but without avail.

Case 2.—Sophia B., aged four years and four months, was sick one week, with pseudo-membranous laryngitis, under the care of another physician. He was called to see her at night, March 17th, 1863, and found her struggling for breath, with blue lips, and a cyanosed appearance of the whole surface. He recommended the operation, but the parents would not consent. Emetics, etc., were used, but without benefit. The attacks of suffocation became so violent that they sent for him in haste early the next morning. He found the child in such extreme danger that he operated with but one assistant, his brother, a clergyman. The child did well, breathed easily, was quite comfortable, and played with her toys. On the evening of the second day, while on her nurse's lap, she was seized with convulsions, and died before he reached the house. No autopsy was permitted.

Case 3.—February 24th, 1865. Annie W. S., aged 5 years, suffered from membranous croup for several days. Suffocation became imminent, and tracheotomy was recommended, but not accepted by the parents until the last moment. Assisted by Dr. A. H. Fish, the operation was performed, to the great relief of the child, who fell asleep before the dressing was completed. Dr. D. was too ill to see her the next day, but Dr. Fish attended her and stated that her pulse slowly failed, and, in spite of the remedies used, she died the next evening, from exhaustion, or septicæmia.

Case 4.—Dr. A. H. Fish sent for him in haste, to operate on a boy about three years old, the son of Mr. W., who had been suffering from membranous croup for a week; had expelled considerable portions of the membrane, and was supposed to be doing well until the afternoon of his visit, when the dyspnœa became so urgent that Dr. F. told the parents that the only hope for life was in opening the windpipe, to which they consented. On reaching the house he found the patient in such extreme danger that he hastened to prepare the table and instruments, and directed Dr. F. to administer ether. The child, seeing the doctor approach him, struggled and fell back, apparently dead. Respiration ceased and he was pulseless. The father said, "Well, it is all over, doctor; there is no use of operating now;" to which he replied, "It is his only chance, and can do no harm. He was carried to the table and the trachea rapidly opened, the dilator introduced, and the mouth of the operator applied to the wound, thus using artificial respiration. Very soon the doctor had the satisfaction of seeing the patient breathe, and he is now living and well.

Case 5.—March 16th, 1874. Anna C. N., five years and eleven months old, had been attended by a physician for several days, for sore throat. The child getting worse, he was discharged and Dr. D. sent for. He found the fauces covered with a diphtheritic deposit, and the child breathing with great difficulty. The symptoms of suffocation became so urgent that he proposed tracheotomy, but could not gain the parents' consent until the next day, when the operation was performed. She then breathed easily, but gradually the surface of the body assumed a greenish color, and she died of blood-poisoning the second day after the operation.

Case 6.—January 27th, 1875, Dr. M. O'Hara sent for Dr. D. to see Jas. McG., a stout, plethoric man, aged fifty-two years. The day before he had had a chill, followed by sore throat. January 25th Dr. O'Hara found him with a sore throat, with a small patch of diphtheritic membrane on the left side of pharynx. That night the patient was seized with laryngeal stridor and whispering voice, his neck swelled greatly and became sore on pressure. He was leeched, purged, and aconite given, together with other remedies. Lime was kept slaking constantly in his room, but the breathing became more labored. A tablespoonful and a half of a saturated solution of chlorate of potash was now given every two hours. Chlorate of potassa was given by means of the atomizer, and a fly-blister applied to the throat. He improved for several hours, and then became rapidly worse.

January 29th. Dyspnœa extremely urgent; marked lividity of lips and nails; hands clammy and wrinkled, like those of a washerwoman. Proposed tracheotomy. Professor Agnew saw him and agreed that an operation gave him the only chance for life. He consented, and Dr. D.

operated. The patient's neck was very short and swollen, so that the trachea was found at the unusual depth of two inches. Its rings had become ossified, and considerable difficulty was experienced in penetrating it. He succeeded, however, in cutting and breaking the rings and introducing the dilator. Copious hemorrhage followed, which escaped by the wound and mouth. The canula was then introduced, with great difficulty, and secured by tapes.

The next morning, at five o'clock, he was called in great haste, and found the tube drawn out of the trachea by the swelling of the neck, and the patient nearly asphyxiated. Finding it impossible to again introduce the tube, the dilator was passed in and opened, and he again breathed freely. A careful examination, made by all of us, showed the trachea to lay at a depth of two and a half or three inches from the skin. After trying various tubes unsuccessfully, the dilator was left in the wound. The next day two large pieces of ossified cartilage were removed, and another attempt made to introduce a long canula, made for the purpose, but without success. The dilator was then retained in the wound, large doses of chlorate of potassa given, and the patient made a good recovery.

Case 7.—October 9th, 1875; Dr. D. was sent for by Dr. W. S. Stewart, to see Rebecca E. McK., aged five years. She had been sick with diphtheria about a week, but Dr. S. only saw her for the first time the day previous. Although treated actively, the child grew steadily worse. Dr. D. found her extremely restless, breathing with great difficulty, and every muscle thrown into action to aid the stridulous respiration. Her nails and lips were blue; pulse weak, frequent and irregular; skin commencing to relax, and all the symptoms pointing to a speedy death. Assisted by Drs. Stewart and Watson, and his son, he gave ether and operated. The child made a good recovery and is still living.

Case 8.—January 27th, 1876. R. O., a boy, about seven years old. His physician, Dr. J. F. Meigs, informed Dr. D. that he had had an attack of diphtheria, from which he apparently recovered, and was allowed to go about the house; that he took cold and became hoarse and croupy. Dr. D. found him in very much the same condition as the last patient, and recommended tracheotomy. An assistant admini-tered ether freely, under the influence of which he at once sunk, and before the windpipe could be opened death occurred. The operation was, however, completed, and artificial respiration used, but without avail.

Case 9.—February 7th, 1876. A girl, four years old, a patient of Dr. W. L Atlee, Jr., had been sick a week. She was thoroughly poisoned by the diphtheria, and was passing blood by the kidneys. To avert immediate death by suffocation, tracheotomy was performed, which gave great relief, and prolonged her life for six days, when she finally succumbed.

Prof. Wm. H. Pancoast endorsed the views that had been presented by the lecturer and Dr. Drysdale. The great difficulty is that the surgeon is generally called in too late. Ordinarily, tracheotomy is not a very difficult operation, but in croup the difficulty is very much increased. He had an experience embracing eight cases, all of whom subsequently died, but were greatly relieved by the operation. Where suffocation is impending the operation should be performed, if only to give comfort to the sufferer, and should be resorted to much earlier than it generally is. In successful cases there is always an element of doubt as to the part played by the tracheotomy in the result; the parents are apt to believe that the child might have recovered without its aid. He remembered a case where he was called in to operate, and, as there did not appear to be great urgency, he advised inhalations of lime; the child rapidly recovered, without any operation. He was convinced, however, that the procedure is of great value in the cases described, and did not consider the operation itself as being so serious as it is generally regarded. But in the case of a fat child, struggling and gasping for breath, considerable skill is required to operate quickly and deftly, and at the same time prevent blood from flowing into the trachea. As a rule no anæsthetic should be used, as the blood is already black with want of oxidation and deficient excretion. In the summer of 1858 he had the opportunity of seeing a case with Trousseau, when the operation was followed by great relief. After the operation the patient must be carefully watched, in order to keep the tube clear, and the air of the room must be kept warm and moist.

Dr. Welch said that the question of tracheotomy might be placed in a more favorable light if we should distinguish in our statistics between diphtheria and true croup. He inquired of Dr. Drysdale what had been his experience as regards the success in the two classes mentioned.

Dr. Drysdale could not make any such distinction, because he did not believe that there was any difference. He was confident that the cases he had reported as recovering after tracheotomy would have certainly perished without its aid. In the after-treatment of the cases, milk punch and beef tea should be frequently given. In diphtheria the nourishment of the patient is of primary importance. In addition, he would recommend, and was in the habit of using, large doses of chlorate of potassa, not only for its constitutional effect, but as a solvent of the false membrane, as mentioned by Barthez; he also used it in the atomizer, or hand spray, at frequent intervals.

Dr. G. B. Dunmire inquired of the lecturer as to the question of age in performing tracheotomy. His experience led him to agree with Guersant,* that if the child was less than two years old, and particularly when under the influence of the diphtheritic poison, the operation was contra-indicated. He was aware that cases

* Dr. R. J. Dunglison's translation, "Surgical Diseases of Infants and Children," p. 48.

had been reported in which infants of six months were saved, but no evidence was given to show that there had been general diphtheria.

Dr. Packard replied that if the patient were overcome by the disease, he would be slow to operate, as death was threatened by blood-poisoning, but where the child is suffocating from occlusion of the larynx, he thought the operation was strongly indicated, and in such cases certainly gives great relief. Apart from the diphtheritic poisoning, he could see no reason why the obstruction to the breathing should not be relieved by tracheotomy at any age. The operation must not be judged by ordinary standards, because it is performed under extraordinary conditions. A proportion of five per cent. of recoveries would be very small in hernia operations, but would be good in these cases of croup, provided that the mortality was not in any way attributable to want of skill in operating.

Dr. Richard A. Cleemann had a successful case to report. The child was four years old, had diphtheria, with albuminuria and paralysis. Dr. Hodge performed the operation and the child recovered. He thought it very important that the inner tube should be longer than the outer, on account of the difficulty of keeping it clean. In the case referred to he had drawn a cast of the trachea and bronchus out of the tube after operation.

Dr. Packard was of the opinion that in some cases chloroform might be used in children, but generally no anæsthetic is needed. He admitted the force of Dr. Pancoast's remarks about the parents' postponing the operation until the chances of success are diminished, and thought that physicians should be more decided and positive when the operation is indicated. Whenever the child's life is threatened by occlusion of the larynx, this is a danger that may be set aside by tracheotomy. The atmosphere of the room should be kept moist with steam after operating, and the atomizer might be used, with lactic acid or lime water, or the vapor of lime inhaled.

Dr. Thos. B. Andrews reported a case upon whom he operated four weeks before, in which no anæsthetic was given. On opening the trachea the child breathed freely, and immediately expelled false membrane by coughing. The child died thirty-two hours after the operation.

Dr. John H. Packard said that he could not give a very encouraging statement of the statistics of the operation in his own experience, but thought that the unfavorable result was attributable to the delay in operating. Tracheotomy is considered as a last resort, and the consent of the friends cannot be obtained, in many cases, until it is certain that death is imminent without it. He had performed tracheotomy in croup, in all, four times.* One case lived six days, but the diphtheritic poisoning prevailed, and the little patient finally succumbed. Another had great swelling of the glands of the neck; he was at a loss to account for the fatal result here, except from the supposition that it was due to latent diphtheritic poisoning. The third case was a child seven years of age, and was in extremis at the time of operation; she lived in comfort for nearly twenty-four hours. The fourth was at the Episcopal Hospital, in this city. The child was two years old, and had been brought from a distance; he was unacquainted with the previous history. It was evidently moribund at the time tracheotomy was performed, but lived for forty-eight hours afterward, in comparative comfort. He urged the earlier performance of the operation, as soon as there is positive obstruction to respiration, for he strongly believed that by overcoming the laryngeal obstruction the patient is afforded a better chance of recovery.

*[A report of further and more favorable experience has been since furnished to the readers of the REPORTER.—P.]

EDITORIAL DEPARTMENT.

PERISCOPE.

Studies on the Phenomena of Putrefaction.

At a late meeting of the Clinical Society of Glasgow, Dr. Dougall showed specimens of fluids which he had kept for four years. They had been prepared, along with many others, to illustrate the phenomena of putrefaction and the action of various anti-putrescents. 1. A specimen of beef juice in a state of putrefaction; the bottle had been kept in the dark, and was glass-stoppered, and the fact that putrefaction still continued threw light on the state of sewer fluids pent up in dark places. 2. A specimen of beef juice, in which fermentation was induced by the addition of hydrochloric acid. If an albuminous fluid be divided into two parts, and one of these set aside, it putrefies; but if to the other part a vegetable or mineral acid be added, the putrefactive process is averted, and instead of it we have in a few days tufts of fungi, and after several months the reaction of albumen is quite lost in the fluid so treated. Contrasting this with specimen No. 1, where putrefaction was still in progress after four years, Dr. Dougall said it showed that fermentation was a much quicker process than putrefaction. 3. A specimen of beef juice, in which the putrefactive process had been

arrested by the addition of hydrochloric acid. Two weeks after addition of the acid, the putrid odor had disappeared, and was replaced by a fragrant smell, possibly akin to that of valeriana. This odor had been retained by the specimen for four years. Dr. Dougall also showed various solutions, to illustrate the theory of subsidence of germs or particles from the air; in one of these, boiled urine had been kept quite sweet and clear for four years, by the simple precaution of plugging the neck of the flask with common cotton-wool, which acted as a filter to the particles in the air. This cotton-wool had been subjected to microscopical examination (with $\frac{1}{12}$ lens), but only amorphous particles were seen.

Treatment of Exophthalmic Goitre by Galvanization.

In the *Gaceta Medica Italiana*, Dr. D'Ancona relates the case of a woman, aged nineteen, suffering for two years from exophthalmic goitre, the usual triad of symptoms being well marked. In spite of all kinds of treatment she had arrived at such a stage of cachexia that her life was despaired of. At length galvanization with ten elements of Stöhrer's portable battery was tried; and on finding that it was followed by rapid signs of amelioration, it was persevered in for five months. During this time one hundred seances, lasting from three to five minutes each, were given to the patient. She gained thirty pounds in weight; her face lost its paleness, and regained its natural color; the exophthalmia disappeared almost completely, as well as the enlargement of the thyroid body, and the pulse fell from 130 to 90. Menstruation was restored, and in every respect the health of the patient was entirely re established.

The Action of Diuretics.

According to Grützner (*Pflüger's Archiv*, xi. 370) there are two distinct modes by which the secretion of the kidney can be increased medicinally: (1) by raising the pressure in the arterial system generally, *e.g.*, by digitalis or strychnia; and (2) by directly influencing the secreting tissues of the organ, *e.g.*, by urea or nitrate of soda. If the blood-pressure in the arteries be lowered in rabbits or dogs by dividing the cervical portion of the spinal cord, and so destroying the controlling effect of the vaso-motor centre in the medulla oblongata, the urinary secretion almost completely ceases. If, however, urea or nitrate of soda be injected into the veins, there is a slight rise in the blood-pressure, and the kidneys recommence secreting under a pressure far below that at which they ordinarily secrete. The above drugs have the same effect if the blood-pressure is lowered by large doses of chloral hydrate or curare. This action of urea and nitrate of soda on the renal secretion appears to be of a "specific" character, and to be in some way connected with the function of the Malpighian tufts. It can be prevented by stimulating the medulla oblongata by electricity or by carbonic acid poisoning, and so raising the blood-pressure throughout the body; for this induces vaso-motor nerve spasm, contraction of the renal arterioles, lowered blood-pressure in the glomeruli, and arrest of the renal secretion, in spite of the presence of these diuretics in the blood, the proof that the glomeruli are involved being this, that previous section of the vasomotor nerves of one kidney is followed by abundant secretion of urine when the blood-pressure is raised, while the other kidney scarcely secretes at all. It further appears from Grützner's experiments that digitalis and strychnia exert a peculiar influence on the renal arterioles, leading to vascular spasm and arrest of the urinary secretion, which does not depend on the vaso-motor action of the medulla oblongata, since it occurs indifferently whether the vaso-motor nerves of the kidney are divided or intact. That the effect is due to intra-renal vascular spasm is shown by the abundant diuresis which occurs at a later stage, when the spasm has ceased, but the general arterial pressure continues high.

Gelseminum Sempervirens in Neuralgia.

The action of this drug in affections of a neuralgic character, says the *Medical Examiner*, has recently been studied by Dr. Emery-Heroguelle, who made it the subject of his inaugural thesis. A summary of his observations appeared in a recent number of the *Paris Médical*. Taken in a large dose gelseminum produces frontal headache, stunning, visual troubles, diplopia, contraction of the pupil, and dropping of the upper eyelid. There is also weakness of the legs. The author reports six cases of intoxication from this drug, taken in mistake. Gelseminum is administered in powder or in pills in the dose of three-fourths of a grain to three grains of the powder of the roots. It may also be given in the form of tincture, made with 100 parts of alcohol at 60° to 5 parts of the powdered root. The dose is from 40 to 80 drops. A syrup may be also made by adding 50 parts of the tincture to 1000 of simple syrup. M. Dujardin-Beaumetz has also had prepared an aqueous extract and an alcoholic extract. M. Emery-Heroguelle reports thirty-one observations collected in the service of M. Dujardin-Beaumetz, and from foreign journals, all of which refer to the action of the drug on neuralgia. From an analysis of the results, it appears that gelseminum may be especially looked upon as an anti-neuralgic; that it acts favorably in cases of dental neuralgia of the fifth pair, of the frontal, temporal, supra-, and infra-orbital nerves, the brachial plexus, the intercostal and ilio-lumbar nerves. Sciatic neuralgia appears to resist, rather more than other neuralgias, the calming effects of this tincture. Dr. Ortille, of Lille, however, succeeded in curing with this remedy a patient who had suffered for a long time from sciatica which resisted all sorts of therapeutic means. The author considers gelseminum to be a power-

ful sedative in neuralgia, especially in those varieties which are not accompanied by that local fluxion in the affected point. Favorable results have also been seen in hemicrania.

Comparison of the Results of Lithotomy and Lithotrity.

A paper on this subject was recently read by Sir Henry Thompson, before the Royal Medico-Chirurgical Society. The list he gave comprises 500 cases of stone in the bladder of the adult male, in 422 different individuals. All the patients were above twenty years of age, the majority being between fifty and seventy years, and the mean age was sixty-one and a half. Of these 500 cases, 422 were treated by lithotrity, and 78 by lithotomy, with a total of 61 deaths, or an average mortality of 12.2 per cent. Such a result in so large a number of unselected cases is alike gratifying and enviable, whether taken by itself or compared with that obtained by other operators. The published experience of the famous surgeons, Cheselden, Martineau, Brodie and Fergusson, gives an aggregate of 422 similar cases, with 69 deaths, or 13.98 per cent., that is, 1.76 per cent. more than Sir Henry Thompson has had. The statistical results of lithotomy and lithotrity given in Sir Henry Thompson's tables are, however, strikingly different. Of 78 cases treated by lithotomy, 29, or 37.18 per cent., died; while in 422 cases of lithotrity, there were only 32 deaths, or 7.58 per cent. This, of course, does not represent the statistical difference of the two operations in analogous cases. Sir Henry Thompson has always laid stress—and of late years with increasing emphasis—on the fact that the operations should not be regarded as reciprocal, but as complementary one to the other. And the inference to be drawn from his full and complete experience is that lithotrity is, as a rule, unsuitable for stones more than an inch in their long diameter—the actual limit varying with the nature of the calculi—and for those that require the fenestrated-bladed lithotrite. For such lithotomy should be employed.

Reviews and Book Notices.

BOOK NOTICES.

The Advantages and Accidents of Artificial Anæsthesia. By Laurence Turnbull, M.D., PH.G. Philadelphia, Lindsay & Blakiston. 12mo, pp. 208. Price, in paper, 75 cents; cloth, $1.

Close upon the occurrence of two fatal administrations of chloroform in Philadelphia, comes to us a little work under the title given above. It is as truly a *multum in parvo* as has fallen into our hands for many a day.

It begins with the earliest uses of pain-saving agents, giving a brief sketch of them up to the time of the discovery of ether, and closes the first chapter with the announcement that thirty different articles have been found to possess anæsthetic value.

The work, however, is mainly devoted to the three most important agents, viz., ether, chloroform and nitrous oxide, and into the chemical, anæsthetic, and therapeutic values of each the author enters, carefully and explicitly.

We are pleased to see the strong preference the author has for ether. We are glad to see recorded in his work that ether, intelligently administered, will meet nearly if not all the requirements of the profession. We say "if intelligently administered," for it has been our fortune to find very few who have given to the subject the attention it deserves. The medical student takes a private course on the eye, ear, chest, obstetrics, operative surgery, bandaging and fractures, and we had almost said a host of other specialties. But who ever felt it worth his while to study this subject? And throughout the world any one may be called upon, student, nurse or bystander, to give chloroform or ether, while only the skilled surgeon can be allowed to operate. Yet no one who has ever carefully studied the administration of anæsthetics will acknowledge that there is an operation in the whole range of surgery that will require more time to master than the use of these most potent agents.

From the beginning to the end of the book the reader will be impressed with the fairness and candor with which the author has pursued his work. As the subject is one that has absorbed the attention of the medical profession for a quarter of a century, the views of the more eminent and careful observers have been fully but concisely given, so that the reader can find ample material for deciding upon his course of action. Under each anæsthetic will be found the sad death record that has attended its use, and no one can read them and the author's views without being impressed with a due sense of his responsibility whenever he has occasion to use them. Precautions, impending dangers and how to meet them, with modes of resuscitation when too fully influenced, all receive due attention.

The work is one that should have a universal circulation. Though designed for the medical profession, and especially the younger members, it possesses a far greater interest to the general reader than often appertains to medical works.

"X."

THE

Medical & Surgical Reporter,

A WEEKLY JOURNAL,

Issued every Saturday.

D. G. BRINTON, M. D., EDITOR.

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PREMIUM LIST
FOR 1878.

The following premiums are offered to our subscribers as inducements for them to aid us in increasing our circulation:—

1. For one new subscriber to the REPORTER, we give a copy either of the *Physician's Pocket Record* ($1.50), or of Dobell on *Coughs, Consumption and Diet* ($2.00).

2. For two new subscribers to the REPORTER, a copy either of Napheys' *Medical Therapeutics* ($4.00), or Napheys' *Surgical Therapeutics* ($4.00).

3. For one new subscriber to both COMPENDIUM and REPORTER, both the *Physician's Pocket Record* and Dobell on *Coughs, Consumption and Diet.*

In all cases the remittance for the new subscriber must cover one full year's subscription.

THE NATURAL HISTORY OF CRIME.

The most puzzling of all enigmas is the enigma of evil. John Stuart Mill, and before him Leibnitz, declared that its existence is incompatible with the notion of a God at once all-good and all-powerful. The failure of many a religion has been from its incompetence to deal with this problem.

Coming down from the heights of theory to the level of daily social life, the consideration of *crime* is one of the most personal interest to every member of a commonwealth. The tendency of modern investigation is more and more to show that criminals as a class are persons of defective mental power, below the average in ambitions and education. They are shorter lived and much more prone to nervous diseases and some of the forms of insanity. Comparatively few of them will pass the examination required for the army or navy. They are also, as a class, more homely than their ordinary associates of the same level of life, a remark easily verified in walking through the halls of any penitentiary. When their family history can be ascertained, it very commonly shows a record of insanity, epilepsy or drunkenness on the part of one or both parents, and marks of congenital scrofula or syphilis are frequent.

These statements hold generally true of the ordinary type of criminal. Another class, however, come from the higher walks of life. These are more frequently accused of crimes not implying violence, such as forgery, false pretence, breach of trust, perjury, etc.; or if implying violence, then such acts as do not suggest premeditation, but rather emotional impulse. Here, too, a questionable family and personal history, one darkened with mental aberration, marked eccentricity, or hereditary disease, is frequently developed by inquiry.

The history of crime shows that it cannot be traced to any temporary acting power, such as idleness or drunkenness. The devil may still find work for idle hands to do, but, as a rule,

a lazy man is not a criminal; at least, he rarely rises above petty larceny. Nor is drunkenness half the factor in crime that the average temperance lecturer makes it out to be. In Spain, Southern Italy and San Domingo, for example, murders and assaults, highway robbery and burglary have been very common for generations; yet these nationalities are conspicuously temperate people. The Indian Thugs never taste intoxicants. The Russian peasantry are great drunkards, but, according to Mr. Wallace, are quite peaceable in their cups.

Nor is it owing to the intense struggle for life among competing masses. Statistics, the great source of modern argument, published on this subject by the London *Times*, seem to show that, while the aggregate mass of crime in cities is, of course, large, the proportion of criminals to population is, if anything, smaller than in towns and rural districts. In London the proportion is 4 in 10,000; in Liverpool, 11 in 10,000; in Taunton, an inconsiderable village, 17 in 10,000. The favorable showing that London is enabled to make is ascribed to the vigilance of the police, and to the great number and variety of careers open to the inhabitants.

It is asserted that crimes of malignity, and all crimes of violence not dictated by a wish to obtain property, flourish chiefly in small towns and rural districts, a fact of much significance. In fact, the more we study wickedness the nearer we reach the conclusion long since propounded by Socrates, that its only exciting cause is defective knowledge; that, could men clearly understand all the relations of an action, they would always set about it virtuously; and that, as far as our private judgment of the deeds of others is concerned, we cannot do better than to lay to heart the maxim of the French philosopher, *Tout comprendre c'est tout pardonner*. No maxim is more authentic; none is more noble, more calculated to render man considerate in judgment, beneficent in deed.

Notes and Comments.

Treatment of Tinea Tonsurans in Children.

The treatment which Mr. Startin, of London, finds in these cases to be successful and rapid, and to prevent the spread of the disease, consists of: 1. Complete isolation of the patient; 2. Disinfecting and boiling all brushes, towels, etc.; 3. Disinfection of the rooms occupied with burnt sulphur; 4. Great attention to cleanliness and diet. The ill-fed should be well nourished, and any deficiency in food should be made up by the administration of cod-liver oil and iron. The head should be daily washed with yolk of egg and warm water, keeping the hair cut short at, and for a short space around, the diseased patches; and the part should be occasionally dressed with some oleaginous preparation containing a parasiticide, viz., oil of cade or tar, sulphurous acid, and iodine, with a daily application of a stimulating mercurial ointment.

The question is often asked: "Is the child cured, and when may he return to school?" The following rule seems to be the safest and best. So long as any trace of the furfuraceous patches remain upon the head, showing dull, broken hairs, with their minute vegetable organisms, on careful microscopical examination, the child must not be allowed to return to school.

The Action of Malaria.

At a late meeting of the Medical Society of London, Dr. Sullivan read a paper on the action of malaria on the human organism. He advocates the theory that to nerve paralysis, through the action of this poison, must be attributed, not alone the phenomena manifested during a paroxysm, but also the sequel of the intermittent fever. Dr. Sullivan availed himself of the occasion to expound the views of Professor Baccelli, of the University of Rome, on "the influence of malaria on the spleen." He explained, by means of a diagram, copied from one of Baccelli's, the special venous circulation between the spleen, stomach, pancreas, and liver, together with the peculiar function of the spleen destined to supply to the glands of the stomach the materials necessary for their secretion. He therefore concludes that whatever tends, like the poison of malaria, to impair the function or the texture of the spleen (an

organ which, as a part of the lymphatic apparatus, acts so important a part in the formation of the blood and in the process of nutrition), must affect greatly the function of digestion.

On Cerebral Syphilis.

In a recent lecture, Professor Fournier states that of forty-seven cases of cerebral syphilis that have come under his care, only three of the number succeeded grave forms of syphilis. In thirty the syphilis was of a medium ordinary character as regards the amount and quality of the secondary symptoms, while in fourteen the symptoms were of so benign a character as to have long passed unperceived and without treatment. He concludes, (1) any attack of syphilis, whether grave, medium, or benign in its primary manifestations, may be followed by cerebral accidents; (2) that the original benignity of a syphilis (whether treated or not) is no guarantee against the ulterior recurrence of these accidents; (3) as far as facts hitherto are known, the originally medium or benign cases appear to be those which are most often followed by cerebral syphilis. He refers to a case in which, seventeen years after the occurrence of the slightest symptoms of syphilis, the health continuing perfectly good in the meantime, cerebral symptoms occurred, which proved fatal.

The Effects of Lymph on Cicatrization.

Professor Koeberlé, of Strasburg, states that lesions or cuts intersecting the lymphatics are more difficult than others to heal by the first intention. Moreover, the lymph, easily becoming puriform, gives rise to the sanies which, infiltrating the tissues, occasions erysipelas, secondary hemorrhages, and other accidents consecutive upon a wound. This stagnation of the sanies is rendered evident by redness and pain occurring at some point in the line of the cicatrix. It then becomes necessary to allow of its escape by opening the wound at this point. Observation shows that in the middle line of the body, where there are few lymphatics, immediate union often occurs; and further, that longitudinal incisions, which do less injury to the lymphatics, heal better than horizontal ones. Professor Koeberlé hence draws the conclusion that, when practicable, incisions should be made parallel to, and not across, lymphatic vessels.

Correspondence.

Scirrhous Tumor of Liver and Omentum.

Ed. Med. and Surg. Reporter:—

I beg leave to report, through the columns of your journal, a case which has proved of unusual interest to all medical men who saw it. Some time during the early part of June, 1877 (I have no notes of the case, and hence cannot give dates accurately), Mr. M. P. V., aged 54, druggist by profession, consulted my partner (Dr. Tustison) and myself in regard to a tumor located in the umbilical region just above the umbilicus, and a little to the left of the mesian line. For some time previous to this he had been having severe attacks of pain, but of short duration, in this region, and while suffering from one of these attacks, he by accident discovered a "lump," which he described as being about the size of a hickory nut when he first felt it. It was some time after this, however, that he sought our advice. The tumor, when we first examined it, was about the size and shape of a large hen egg, and lying transversely just above the umbilicus. It was very hard, and the surface seemed nodulated. Its position could easily be changed. Pressure upon it gave but little, if any, pain. The only inconvenience he felt from it was the pain, and that occurred principally during the after part of the night. He was well nourished; appetite good; bowels regular; complained of nothing except the pain. Never having seen a similar case, our diagnosis was not very positive then, but, owing to the position of the tumor, the ease with which it could be moved, the hard and uneven surface, and the character of the pain, we were inclined to believe it scirrhous in its nature, and involving the omentum, and so told our patient. We prescribed iodide of potassium in comp. syr. stillingia. Within a short time after this he was induced by friends to consult some physicians of Burlington, who, upon seeing the case, pronounced it, he said, disease of the liver, and gave him the following prescription:—

℞.	Acetate potassium,	ʒj
	Acetic acid,	fl.ʒj
	Spts. eth. nit.,	ʒiss
	Fl. ex. taraxacum,	ʒij. M.

Sig.—Teaspoonful, well diluted, every six hours.

After using the above prescription for some two and a half or three months, he again returned to us. Said he was satisfied it was not the liver, and that all the medicine which he had taken had done him no good. We made an examination then, and found the "lump" three or four times as large as when we first saw it, and still hard and nodulated. Could move the tumor into the left hypochondriac and left lumbar regions. As we could not quite concur in the opinion that it was "disease of

the liver," we therefore advised him to go before the faculty of the College of Physicians and Surgeons at Keokuk, which he did, and was examined by Drs. Hughes, Cleaver and Carpenter, who, he said, pronounced it a hard, malignant tumor, and that it had no connection whatever with the liver. He failed, however, to get their opinion as to what it was attached. Their prescription was the iodo-bromide of calcium comp. and quinine. He followed their prescription until he had consumed five pounds of the solution. He then came to us again, and at this time we found the tumor had grown very rapidly. He was suffering pain all the time, was unable to rest any at night without an opiate, appetite poor, stomach irritable, bowels constipated, and a few days after this he had a severe hemorrhage from the stomach, in which he probably lost a quart of blood, yet there was no diminution in the size of the tumor. After the hemorrhage we prescribed the elix. gentian with chloride of iron, and also advised the use of carbolic acid. Our patient continued to grow worse all the time, and during the month of February I went with him to Chicago, to consult Dr. Gunn, of Rush Medical College. Dr. Gunn gave him but very little encouragement; said he thought it of a malignant character, and that it had probably had its origin in the mesenteric glands. He advised him to continue the carbolic acid and make free use of cream, and opiates sufficient to relieve pain. The patient continued to get worse until the tumor seemed to fill the whole of the abdominal cavity. Suffered the most intense agony when not under the influence of opiates, and during the last four or five weeks of his illness was compelled to lay on the left side all the time. During the last three weeks of his illness he became very much jaundiced. Died March 31. I, with the assistance of Drs. Tustison, J. H. Graham, and T. G. Taylor, made a post-mortem April 1st, and found it to be scirrhus, involving the omentum, mesenteric glands, and a part of the left lobe of the liver, which, in process of time, had cemented, almost in a solid mass, the omentum, transverse colon, stomach, left lobe of liver, and a portion of the mesenteric glands, and the whole mass adhered to the parietes of the abdomen.

W. S. Grimes, M. D.

Wapello, Iowa.

A Case of Arsenical Poisoning Treated by Dialysed Iron.

Ed. Med. and Surg. Reporter.

Having seen reports of several cases of arsenical poisoning in the medical papers, which were treated by dialysed iron, I wish to give my testimony as to its merits. About 10 A.M., January 29th, 1878, I was called upon by a servant girl, who very excitedly told me that Mrs. V.'s little boy had "swallowed something green." I suspected the arsenite of copper. I seized a bottle of Wyeth's dialysed iron, and hastened to the house. I found a boy, sixteen months old, lying upon his back; countenance pale, and indicative of suffering; thighs flexed upon the abdomen, and hands clenched, as though in great pain. There was some green pigment on the fingers, and about the teeth; the mother had endeavored to wash out the mouth. I administered a direct emetic, and sought for the source of the poison. I found a large box of large-sized cakes water-colors, from which box one cake had entirely disappeared. The child had been left to play by itself for quite three-quarters of an hour before I was called, their attention being called to it by its calling for water. The emetic acted and brought a great quantity of the green paint. I gave two teaspoonfuls of iron, diluted, which was rejected in the form of a brown precipitate, insoluble in water. I repeated the dose, and it was again rejected, but this time very little changed in color. The child was now almost in collapse; pulse frequent, feeble and irregular; respiration labored; surface covered with cold perspiration, etc. I ordered brandy, per rectum, friction, etc. Purging now began. In the third watery stool I detected the Schele's green. I ordered the iron in twenty-drop doses, every half-hour for six times, and at longer intervals after, until evening; it was given in olive oil. At night the child was in a better condition; had vomited once during the day, and purged several times. In some of the stools were to be seen the precipitate formed by the iron. The gastro-enteritis following was easily controlled, and the child made a rapid recovery. I have no doubt but that the case would have terminated fatally, if the iron had not been used, for the emetic did not dislodge all of the poison. It would be well for all physicians to keep a bottle of Wyeth's dialysed iron on hand, to be prepared for these emergencies, which are liable to arise at any moment.

G. Miles Arnold, M.D.,

105 *East Seventy-first street, New York city.*

Diphtheria.

Ed. Med. and Surg. Reporter:—

In mild cases of this disease I have for some time employed, with good success, an agreeable combination, consisting of chlorine water, dialysed iron and glycerine.

To children from two to ten years, I give from six to ten drops each of the first two, in a teaspoonful of glycerine, every two hours. If I find much swelling of the tonsils, I add five grains of the chlorate of potassium. If there is present much fetor, or the disease has extended into the nares, I leave out the potassium, and add five grains of the chloride of calcium to each dose. The temperature should be carefully watched. Any marked elevation must be checked, or its depression, so apt to take place at night, promptly relieved by appropriate medication and nourishment.

Very respectfully,

Charles Carter, M. D.

April 7th, 1878.

News and Miscellany.

Personal.

—Dr. J. Robert von Mayer, whose death occurred in March, was one of the most distinguished of modern scientists. Dr. Mayer was a German physician, practicing in Heilbronn and pursuing in an unobtrusive way his philosophical studies, which resulted eventually in the promulgation of a theory—the dynamical theory of heat—by which he securely placed himself amidst the greatest thinkers of his age. It appears that, being engaged professionally at Java, in 1840, the circumstance of bleeding a fevered patient led him to notice that the venous blood of the inhabitants of the Tropics was of a much brighter red than that of men inhabiting colder regions. From this fact he gradually advanced, until, in 1842, he arrived at a clear conception of the mechanical equivalent of heat, which, in the following year, was experimentally demonstrated by Dr. Joule, of Manchester, in entire ignorance of the speculations of Mayer. His philosophic mind gave way under the intense application to which it was subjected, and, for a period, Dr. Mayer was placed in an asylum. Eventually he recovered, but he did not resume his medical practice or his philosophical studies. For the remainder of his days he devoted his attention to the cultivation of his vineyards.

—Europe numbers various persons of noble birth among its physicians. The Grand Duke of Bavaria has a well earned diploma. In England we recall the Hon. Auberon Herbert, M.D., and in Ireland has lately been announced the marriage of the Hon. Arthur Hill Trevor de Montmorency, M.D., L. R. C. S. I., who is practicing in Dublin.

—Dr. Wm. Perry, of Exeter, N. H., writes, in the last number of the *News Letter*, of that place, an account of his trip down the Hudson with Fulton, in his first steamboat, in 1808. The old gentlemen is 92 years old, and hale and hearty.

Items.

—The city of Providence, as appears from its census, taken January 1st, 1878, has diminished in population about a thousand souls, or one per cent. within two and a half years This is attributed by Dr. E. M. Snow, the City Registrar, to the prevailing "hard times," as people can live cheaper in the country than in the city.

A New Sense.

M. E. Cyon has sent a note to the French Academy, in which he claims that the eighth pair of cerebral nerves contains two nerves of entirely distinct senses—the auditory nerve, and the nerve of space (*Raumnerv*). He regards the latter as the source of all our ideas of extension, and of the three dimensions of space.

Queries and Replies.

Medical Ethics.

Mr. Editor:—A employs B as his family physician. A meets with an accident. C, the nearest doctor, is sent for, and is not found. While B is being called, C arrives, and is attending to the wound when B enters. B, without extending to C the *courtesy* which one gentleman observes toward another, carries A to his carriage, drives him home and attends to him. Do you consider B violating medical ethics? X.

Reply.—A lack of courtesy is, of course, contrary to the spirit of the Code. But the statement given is too vagueto pronounce definitely on the case.

Headaches.

Mr. Editor:—If *Subscriber*, page 260, will use Iodoform pills, grain 1, commencing about a week before the menses are expected, and take one before each meal until they appear, he will probably check the headache.

Empire, Kansas. H.

Carbolate of Iodine.

Dr. M., of W. Va., desires a convenient formula for combining iodine and carbolic acid in such cases as ulcerated os, etc.

Mr. Editor:—Will you please inform me, through the Reporter, what is the most simple and certain test for the chlorides in the urine; and if by nitrate of silver, the proportion to the ounce of aqua.

J. A. C.

Answer.—Add a few drops of nitric acid, and then a small quantity of a solution of nitrate of silver, grains 20-30 to fluid ounce 1. A white precipitate indicates the presence of the chlorides.

Obituary.

Seth Shore, M.D.

At a Regular Meeting of the Croton Medical and Surgical Union, held at Katonah, Westchester county, N. Y., April 2d, 1878, the following resolutions were adopted:—

Whereas, we have learned with profound sorrow of the death of Dr. Seth Shore, and

Whereas, it is our sad duty to testify to the great loss sustained by us in his death, and

Whereas, it is becoming and proper that we should bear public testimony to his excellence of character, and to his high professional attainments; Therefore, be it

Resolved, That in the death of Dr. Shore, this Society, of which he was an honored and efficient member, has sustained a loss which is irreparable.

Resolved, That we bear witness to his superior talents, his cultivated mind, his kind heart, his sympathizing nature, and his high sense of professional honor.

Resolved, That in his varied learning, his ripe professional experience, and his wise counsels, we recognize the qualities that constitute the highest type of a physician, and the best guarantees for the professional success which crowned his career.

Resolved, That we shall ever cherish his noble example as a man, his enviable reputation as a physician, and his endearing qualities as a friend.

Resolved, That we sympathize with his family in this their overwhelming sorrow.

Resolved, That a copy of these resolutions be sent to the family of the deceased, and that they also be published in the Medical and Surgical Reporter, and the local papers.

J. Q. Adams, M.D.
J. H. Smith, M.D.
L. F. Pelton, M.D.
Committee.